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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/806,801

03/23/2004

Arthur V. Hawley

03-0194

2906

63076 7590 12/11/2008
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EXAMINER

THOMAS, LUCY M

ART UNIT

PAPER NUMBER

2836

MAIL DATE

DELIVERY MODE

12/11/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/806,801	Applicant(s) HAWLEY, ARTHUR V.	
	Examiner Lucy Thomas	Art Unit 2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on RCE filed on 10/07/2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5-10,13-16 and 18-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18-24 is/are allowed.
- 6) ☒ Claim(s) 1-2,5-10,13-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 5, 7-10, 13, 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuras et al. (US 5,698,316). Regarding Claim 1, Kuras discloses an apparatus (see Abstract, Figure 1) for protecting a composite-body aircraft against damage from lightning strikes comprising;

an aircraft body including a plurality of composite panels 14;

a first plurality of electrically conductive splice plates 28 extending along junctions between adjacent ones of the composite panels at respective edges of the adjacent composite panels, the first plurality of electrically conductive splice plates abutting exterior surfaces of the composite panels;

a second plurality of splice plates 18 extending along the junctions between adjacent ones of the composite panels at respective edges of the adjacent composite panels, the second plurality of splice plates abutting interior surfaces of the composite panels;

plurality of electrically conductive straps 32;

and plurality of electrically conductive fasteners 20;

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wherein the straps and fasteners mechanically and electrically couple adjacent ends of the splice plates (ends of 28 to both sides of 16) to one another such that the splice plates form a continuous, electrically conductive grid disposed about the surface of the aircraft body (splice plates 28 are mechanically and electrically coupled for the passage of lightning strike energy, see Figure 2, Column 7, lines 23-32, Column 1, lines 12-15, 42-50, Column 5, lines 1-9). Kuras does not disclose the second plurality of splice plates as electrically conductive. It would be obvious to one of ordinary skill in the art at the time the invention was made to provide the second plurality of splice plates of electrically conductive or of suitable material to meet the design requirements of the system, because the second plurality of splice plates provides a support for the joining, whereas the first plurality of splice plates on the exterior forms the electrically conductive grid.

Regarding Claim 2, Kuras discloses the apparatus, wherein the continuous, electrically conductive grid extends to the outermost lateral periphery of the aircraft body (grid formed by 28 is on the exterior of the aircraft body).

Regarding Claim 7, Kuras discloses the apparatus, wherein the plurality of composite panels comprises graphite fibers (Column 4, lines 28-30).

Regarding Claim 8, Kuras discloses the apparatus, wherein the aircraft body includes an electrical system, and wherein the electrically conductive grid comprises a ground return path of the electrical system (Column 1, lines 51-58).

Regarding Claims 9-10, and 15-16, the recited steps of the method claims would necessarily be performed when using the apparatus recited in Claim/s 1-2, 4, and 7-8. Therefore, please see the rejection/s for Claims 1-2, 4, and 7-8 recited above.

Regarding Claims 5 and 13, although Kuras does not disclose using titanium for the conductive splice plates, he does disclose the use of titanium as connector. It would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized titanium for the splice plates also for its superior material properties, strength, weight, and electric potential.

3. Claims 6 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuras et al. (US 5,698,316) in view of Sankrithi (US 6,666,406). Regarding Claims 6, 14, and 21, Kuras does not disclose that the aircraft a blended-wing-body ("BWB") type aircraft. Sankrithi discloses a blended wing aircraft is made of composite materials (column 3, lines 12-15). It would have been obvious to one of ordinary skill in the art at the time of the invention to have used the plurality of splice plates of Kuras in blended wing aircraft because Sankrithi teaches these aircraft have composite panels and Kuras teaches such panels need protection

Allowable Subject Matter

4. Claim 18-24 allowed.

5. The following is a statement of reasons for the indication of allowable subject matter: Regarding Claim 18, Kuras discloses an aircraft body, comprising: a plurality of composite panels 14, adjacent pairs 14a, 14b of the composite panels defining a groove 16 therebetween; and a plurality of electrically conductive splice plates 28, each splice

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plate disposed within one of the grooves; wherein adjacent ends of the splice plates are mechanically and electrically coupled to one another such that the splice plates form a continuous, electrically conductive grid about the aircraft body. Kuras does not disclose that the groove is V-shaped such that the exterior surface of each splice plate is flush with the exterior surfaces of the adjacent pair of composite panels. This limitation, in combination with the other recited elements, is not disclosed by the Prior Art of record, and therefore allowable. Claims 19-24 depend on Claim 18.

Response to Arguments

6. Applicant's arguments filed on 10/07/2008 have been fully considered but they are not rendered moot in view of new grounds of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lucy Thomas whose telephone number is 571-272-6002. The examiner can normally be reached on Monday - Friday 8:00 AM - 4:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Elms can be reached on 571-272-1869. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/L. T./

Examiner, Art Unit 2836

December 05, 2008

/Stephen W Jackson/

Primary Examiner, Art Unit 2836